

IN THE SPECIFICATION

[021] In the run in position of Figure 7, the seal bore 38' has a clearance 68 around the string and setting tool 12'. The ball seat 16' is located below gravel pack port 20'. During run in and setting of the packer 14', the gravel pack port 20' is sealed in seal bore 28' by virtue of seals 32'. When the ball 46' lands on seat 16' it will not go any lower. Thus exposure to sub-hydrostatic formation pressures below ball 46' will not affect the setting of packer 14'. This is because there is no longer any need to shear out the seat 16' due to its location below gravel pack port 20'. An upward shift of the crossover tool 18' will position gravel pack port 20' out and above seal bore 28', as illustrated in Figure 10, so that gravel slurry 56' can be pumped down string 12' and into annulus 26' with returns 58' coming through flapper 34' and into annulus 54' by way of return ports 36'. It should be noted that during circulation, the evacuation ports 60' are above the seal bore 28' but internal pressure in wash pipe 30' is prevented from exiting the wash pipe 30' through the evacuation ports 60' by the presence of check valves 66. This is because the pressure in annular space 70 70' exceeds the pressure within the wash pipe 30' forcing the valve member 72 against its seat 74 with the assistance of spring 76.